

System and Method for Reclaiming Allocated Memory to Reduce Power in a Data Processing
System

ABSTRACT

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A method of managing power in a data processing system includes monitoring a system
parameter indicative of power consumption. Responsive to determining that the parameter
differs from a specified threshold, a system guest, such as an operating system, is forced to
release a portion of its allocated system memory. The portion of system memory released by the
10 guest is then reclaimed by the system. The reclaimed system memory and the resulting decrease
in allocated memory may enable the system to reduce system memory power consumption. The
operating system may de-allocate a portion of system memory when a balloon code device driver
executing under the operating system requests the operating system to allocate memory to it.
The system memory allocated to the balloon device driver is then reclaimed by supervisory code
15 such as a hypervisor.